CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO.

FOR
JAMES H. WHEELER AND EIE LAMBDA, LLC
BRIDGES ON THE RIVER RESTAURANT
SACRAMENTO COUNTY

This Monitoring and Reporting Program (MRP) describes requirements for monitoring treated wastewater discharged to the injection wells, groundwater, the restaurant water supply, biosolids, and reverse osmosis reject brine. This MRP is issued pursuant to Water Code Section 13267. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer.

All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. The time, date, and location of each grab sample shall be recorded on the sample chain of custody form.

Field test instruments (such as those used to test pH and electrical conductivity) may be used provided that:

1. The user is trained in proper use and maintenance of the instruments;
2. The instruments are field calibrated prior to monitoring events at the frequency recommended by the manufacturer;
3. Instruments are serviced and/or calibrated by the manufacturer at the recommended frequency; and
4. Field calibration reports are submitted as described in the "Reporting" section of this MRP.

WASTEWATER MONITORING

Wastewater samples shall be obtained from the outlet of the reverse osmosis unit or a sampling port in the pipeline connecting the reverse osmosis unit to the injection wells. At a minimum, the Discharger shall perform wastewater monitoring as follows:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Electrical Conductivity	umhos/cm	Meter reading	Continuous	Monthly [1]
Total coliform organisms [2]	MPN/100mL	Grab	Daily [3]	Monthly
MS-2 coliphage [4]	pfu	Grab	Weekly	Monthly
Standard minerals [5]	mg/L	Grab	Monthly	Monthly

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Metals [6]	ug/L	Grab	Monthly	Monthly

[1] Provide strip charts or tabulated datalogger report.

[2] Samples shall be analyzed using a minimum of 15 tubes or three dilutions.

[3] Sampling shall be performed each and every day that the WWTF is operating.

[4] Samples shall be tested using EPA Method 1601.

[5] Standard Minerals shall include, at a minimum, the following elements/compounds: pH, boron, bromide, calcium, chloride, fluoride, magnesium, nitrate as nitrogen, phosphate, potassium, sodium, sulfate, total alkalinity (including alkalinity series), total hardness as $CaCO_3$, and total dissolved solids.

[6] At a minimum, the following metals shall be included: aluminum, arsenic, cadmium, copper, lead, iron, manganese, nickel, and zinc. Analytical methods shall be selected to provide reporting limits below the Water Quality Limit for each constituent.

GROUNDWATER MONITORING

Beginning upon adoption of this Order, the Discharger shall establish a monthly sampling schedule for groundwater monitoring. Beginning with the fourth quarter of 2005, the groundwater monitoring frequency shall be quarterly, with samples obtained approximately every three months. Regardless of the sampling frequency, the reporting frequency shall be quarterly.

Prior to construction of any groundwater monitoring wells, the Discharger shall submit plans and specifications to the Regional Board for review and approval. Once installed, all new wells shall be added to the MRP and shall be sampled and analyzed according to the schedule below.

Prior to sampling, the groundwater elevation shall be measured in each well, and the wells shall be purged of at least three casing volumes until temperature, pH and electrical conductivity have stabilized. Depth to groundwater shall be measured to the nearest 0.01 feet. Samples shall be collected and analyzed using standard EPA methods. Groundwater monitoring shall include, at a minimum, the following:

Constituent	Units	Type of Sample	Sampling Frequency [1]	Reporting Frequency
Depth to groundwater	0.01 feet	Measurement	Quarterly	Quarterly
Groundwater elevation [2]	0.01 feet	Calculated	Quarterly	Quarterly
Gradient	feet/feet	Calculated	Quarterly	Quarterly
Gradient direction	Degrees	Calculated	Quarterly	Quarterly

Constituent	Units	Type of Sample	Sampling Frequency [1]	Reporting Frequency
Total dissolved solids	mg/L	Grab	Quarterly	Quarterly
Electrical conductivity	umhos/cm	Grab	Quarterly	Quarterly
Nitrate nitrogen	mg/L	Grab	Quarterly	Quarterly
pH	standard	Grab	Quarterly	Quarterly
Total coliform organisms	MPN/100 ml	Grab	Quarterly	Quarterly
Title 22 metals [3]	ug/L	Grab	Annually	Annually
Standard minerals [4]	mg/L	Grab	Annually	Annually

[1] Beginning upon adoption of this Order, the sampling frequency shall be monthly for all constituents. Beginning with the fourth quarter of 2005, the groundwater sampling frequency shall be as specified in the table.

[2] Groundwater elevation shall be determined based on depth-to-water measurements using a surveyed measuring point elevation on the well and a surveyed reference elevation.

[3] At a minimum, the following metals shall be included: antimony, arsenic, total chromium, hexavalent chromium, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium, and zinc. Analytical methods shall be selected to provide reporting limits below the Water Quality Limit for each constituent.

[4] Standard Minerals shall include, at a minimum, the following elements/compounds: boron, calcium, chloride, iron, magnesium, manganese, potassium, sodium, sulfate, total alkalinity (including alkalinity series), and hardness. Analytical methods shall be selected to provide reporting limits below the Water Quality Limit for each constituent.

WATER SUPPLY MONITORING

Water supply monitoring shall include, at a minimum, the following:

Constituent	Units	Type of Sample	Sampling and Reporting Frequency
Total dissolved solids	mg/L	Grab	Quarterly
Electrical conductivity	µmhos/cm	Grab	Quarterly
Nitrate nitrogen	mg/L	Grab	Quarterly
pH	standard	Grab	Quarterly
Total Coliform organisms	MPN/100 ml	Grab	Quarterly
Title 22 metals [1]	µg/L	Grab	Semi-Annually

Constituent	Units	Type of Sample	Sampling and Reporting Frequency
Standard minerals [2]	mg/L	Grab	Semi-Annually

[1] At a minimum, the following metals shall be included: antimony, arsenic, total chromium, hexavalent chromium, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium, and zinc. Analytical methods shall be selected to provide reporting limits below the Water Quality Limit for each constituent.

[2] Standard Minerals shall include, at a minimum, the following elements/compounds: boron, calcium, chloride, iron, magnesium, manganese, potassium, sodium, sulfate, total alkalinity (including alkalinity series), and hardness. Analytical methods shall be selected to provide reporting limits below the Water Quality Limit for each constituent.

BIOSOLIDS MONITORING

When sludge (biosolids) is removed from the treatment system, at least one composite sample of biosolids shall be collected in accordance with EPA's POTW Sludge Sampling and Analysis Guidance Document, August 1989, and tested for cadmium, copper, nickel, chromium, lead, and zinc

Sludge sampling and analysis records shall be retained for a minimum of five years. A log shall be kept of sludge quantities generated and of handling and disposal activities. The frequency of entries is discretionary; however, the log should be complete enough to serve as a basis for part of the annual report.

REVERSE OSMOSIS REJECT BRINE MONITORING

When reverse osmosis brine is removed from the storage tank for off-site disposal, the Discharger shall document the date, volume of brine removed, hauling contractor, and disposal site. A log shall be kept of all brine handling and disposal activities. The frequency of entries is discretionary; however, the log must be complete enough to serve as a basis for part of the annual report.

REPORTING

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., effluent, pond, etc.), and reported analytical result for each sample are readily discernible. The data shall be summarized in such a manner to clearly illustrate compliance with waste discharge requirements and spatial or temporal trends, as applicable. The results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Program shall be reported to the Regional Board.

As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, all Groundwater Monitoring Reports shall be prepared under the direct supervision of a Registered Engineer or Geologist and signed and stamped by the registered professional.

A. Monthly Monitoring Reports

All daily, weekly, and monthly monitoring data shall be reported in monthly monitoring reports. Monthly reports shall be submitted to the Regional Board on the **1st day of the second month following sampling** (i.e. the January Report is due by 1 March). At a minimum, the reports shall include:

1. Results of wastewater, water supply, biosolids, and reverse osmosis brine monitoring;
2. A comparison of monitoring data to the discharge specifications and effluent limitations and an explanation of any violation of those requirements. Data shall be presented in tabular format;
3. Copies of all laboratory analytical report(s); and
4. A calibration log verifying calibration of all hand-held monitoring instruments and devices used to comply with the prescribed monitoring program.

B. Quarterly Monitoring Reports

Quarterly monitoring reports shall be submitted to the Regional Board by the **1st day of the second month after the quarter** (i.e. the January-March quarterly report is due by May 1st) and may be combined with the monthly report. The Quarterly Report shall include the following:

1. Results of groundwater monitoring for all groundwater sampling activities during the quarter;
2. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities for the groundwater monitoring. The narrative shall be sufficiently detailed to verify compliance with the WDR, this MRP, and the Standard Provisions and Reporting Requirements. The narrative shall be supported by field logs for each well documenting depth to groundwater; parameters measured before, during, and after purging; method of purging; calculation of casing volume; and total volume of water purged;
3. Calculation of groundwater elevations, an assessment of groundwater flow direction and gradient on the date(s) of measurement, comparison of previous flow direction and gradient data, and discussion of seasonal trends if any;

4. A narrative discussion of the analytical results for all groundwater locations monitored including spatial and temporal tends, with reference to summary data tables, graphs, and appended analytical reports (as applicable);
5. A comparison of monitoring data to the groundwater limitations and an explanation of any violation of those requirements;
6. Summary data tables of historical and current water table elevations and analytical results;
7. A scaled map showing relevant structures and features of the facility, the locations of monitoring wells and any other sampling stations, and groundwater elevation contours referenced to mean sea level datum;
8. Copies of laboratory analytical report(s) for groundwater monitoring.

C. Annual Report

Beginning in **February 2006**, an Annual Report shall be prepared and submitted to the Regional Board by **1 February** each year. The Annual Report shall include all monitoring data required in the monthly/quarterly schedule. In addition, the Annual Report shall include the following:

1. The contents of the regular groundwater monitoring report for the last quarter of the year;
2. If requested by staff, tabular and graphical summaries of all data collected during the year;
3. An evaluation of the groundwater quality downgradient of the injection wells;
4. An evaluation of the restaurant water supply quality;
5. A discussion of compliance and the corrective actions taken, as well as any planned or proposed actions needed to bring the discharge into full compliance with the waste discharge requirements;
6. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program;
7. The results for analyses that are performed annually (as set forth above);
8. A summary of information on the management and disposal of biosolids and reverse osmosis reject brine;
9. The results from any analytical testing performed to characterize the biosolids prior to off-site disposal;
10. A forecast of influent flows for the coming year, as described in Standard Provision No. E.4;

11. Name and contact information for the certified wastewater operator responsible for operation, maintenance, and system monitoring.

A letter transmitting the self-monitoring reports shall accompany each report. The letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain the penalty of perjury statement by the Discharger, or the Discharger's authorized agent, as described in the Standard Provisions General Reporting Requirements Section B.3.

The Discharger shall implement the above monitoring program as of the date of this Order.

Ordered by: _____
THOMAS R. PINKOS, Executive Officer

_____
(Date)

ALO:7/21/2005